



CALL 360

IBM

IBM United Kingdom Limited
Data Centre Services

STRATPLAN





CALL/360 STRATPLAN is a valuable service for corporate planners. It is a system which enables you to develop a model of your company; to run forecasts based on alternative 'what if . . . ?' assumptions; and to produce plan documentation, including succinct graphical reports for executive management.



Introduction

Corporate planning, financial problem-solving and new project evaluation are increasingly difficult in today's complex, competitive and fast changing economy. Yet the importance of these tasks has never been greater, carrying as they do responsibility to advise on the financial opportunities and risks that a company faces.

Most strategic decisions commit an organisation for many years, so it is important to make a careful study of a range of possible actions before selecting a strategy to achieve the company objectives. Within these objectives, departmental and divisional actions need to be co-ordinated so that all parts of the organisation work towards a consistent plan.

Financial and business planning can include budgeting, cash planning, marketing projections and manpower allocations. It has to include consideration of the possible effects of investment, market shifts, new products, R & D, personnel policies, takeovers and joint ventures.

The job is an extremely complex one for companies of any size. Skilled accountants can spend a large part of the planning cycle wading through historical records and making forecasts. Too often, many future options are left unexamined for lack of time.

The evaluation of an appropriate strategy involves testing changes in forecasts or other assumptions. As assumptions are changed, the process of adding up detailed projections, applying cost factors and drawing off totals may have to be repeated several times. Even a small change can involve a large amount of repetitive work; inaccuracy can creep into big calculations. But the planner cannot get on with his work until these results have been produced.

In addition to changes introduced whilst refining the plan, external events occur which have a considerable impact on organisations. The plan needs to be updated to take into consideration dramatic influences such as strikes, non-availability of certain raw materials or changes in the rates of Value Added Tax. The effects should be tested to see if resources can be mobilised to cope with the situation. If there are delays in conducting these tests, the solutions open to a company's policy makers may be severely limited.

Even the best laid plans are of little value unless they are acted upon. Targets and budgets need to be monitored regularly through the planning period so that out-of-line situations can be resolved quickly.

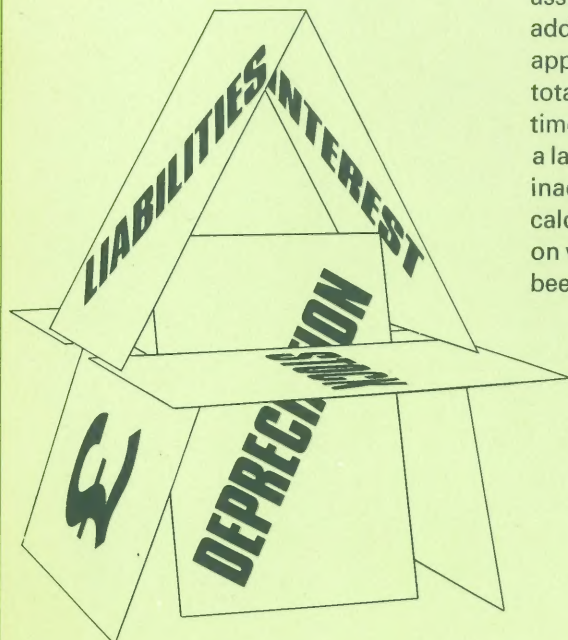
What you get from STRATPLAN

CALL/360 STRATPLAN can help you to plan and control your business.

You specify the way your business operates, identifying the information necessary to satisfy your company's accounting and reporting requirements.

CALL/360 STRATPLAN is an extremely powerful tool and it is easy to use. It is operated from a typewriter terminal in your office so you can obtain quickly the results that allow you to make rapid progress with your work. STRATPLAN performs a lot of routine work to give you time for more detailed planning. But it is not just a matter of speeding up the work you are doing already: you can test out more ideas quickly; and by conversing with the computer you can arrive at better solutions.

When you have developed your plan and run your forecasts STRATPLAN prints the tabulations, balance sheets, profit statements and ratios you want in a matter of minutes.



The way a company operates

For the purpose of illustrating the basic characteristics of STRATPLAN, a simplified example is described here :

Revenue

This company's revenue is derived solely from the sales of one product with a unit price of £10.50. The sales forecast figures are stored in a CALL/360 file referred to by the number 20.

```
00100 SALES=DATA(20)
00110 PRICE=10.50
00120 REVENUE=SALES*PRICE
```

The production costs of sales

Raw materials cost £2.50 per unit; the standard operation time is 2 hours per unit; the rate for the job is £0.90 per hour. Other direct costs have been forecast (reference 10) but will never be greater than £2,100 per period.

```
00130 PRODUCTION COSTS -
00140 DIRECT COSTS -
00150 MATERIALS=2.5*SALES
00160 LABOUR=2*0.9*SALES
00170 OTHER DIRECT=DATA(10)&IF(>2100)=2100
00180 INDIRECT COSTS -
00190 OVERHEADS=1500+PERIOD(50)
00200 TOTAL PROD COSTS=SUM(MATERIALS,OVERHEADS)
```

Overheads have a base of £1,500 but an allowance is made for increasing costs so they are £50 more in each successive period.

The total production cost of sales is calculated by adding together all the items from 'materials' to 'overheads' inclusive.

Gross profit

```
00210 GROSS PROFIT=REVENUE-TOTAL PROD COSTS
00220 GP/REVENUE %=GROSS PROFIT/REVENUE*100
```

Sales costs

Commission and other direct selling costs account for 20% of the revenue. Indirect costs are £1,000 but are expected to increase by £25 each period.

```
00230 SALES COSTS -
00240 2:DIRECT COSTS=REVENUE*20/100
00250 3:INDIRECT COSTS=1000+PERIOD(25)
00260 TOTAL SALES COSTS=SUM(2,3)
```

Profit before tax and net profit

The Exchequer collects 40% of the net profit before tax.

```
00270 PROFIT BEFORE TAX=GROSS PROFIT-TOTAL SALES COSTS
00280 PBT/REVENUE %=PROFIT BEFORE TAX/REVENUE*100
00290 TAX=PROFIT BEFORE TAX*0.40
00300 NET PROFIT=PROFIT BEFORE TAX-TAX
```

You can specify virtually any relationship you like using simple logical instructions such as 'greater than' or 'equal to' and the normal arithmetic operations.

Using STRATPLAN to build a model of your company's operations, you avoid the complexities that might otherwise be encountered with programming languages. The terms you use are those you use already in your business.

STRATPLAN is easy for you to use

In a real case, the example illustrated could be expanded to include sub-models for marketing and production : product mix, market share, sales promotion, depreciation and new production techniques are some of the factors you would consider.

Stocking raw materials or finished goods, transportation and the financing of these operations can also be planned using STRATPLAN.

If appropriate, separate departments or projects can be modelled individually allowing varying depths of detail and use by different functional executives. You can combine all the relevant features of these sub-models into your consolidated company reports.

STRATPLAN can deal with your planning requirements, even when they are large and complex.

Forecasting

The examples illustrated here relate to the data files referenced in the construction of the model.

SPECIFY OPERATION ?GENERATE

REFERENCE NO. ?10

FUNCTION ?LINEAR

LINEAR: ENTER PERIOD, VALUE FOR TWO PERIODS

FIRST PERIOD, VALUE ?1,800

SECOND PERIOD, VALUE 24,900

REFERENCE NO. 10 GENERATED

SPECIFY OPERATION ?PRINT 10

REF NO. PERIODS VALUES

10	1 - 6	800.00	804.35	808.70	813.04	817.39	821.74
	7 - 12	826.09	830.43	834.78	839.13	843.48	847.83
	13 - 18	852.17	856.52	860.87	865.22	869.56	873.91
	19 - 24	878.26	882.61	886.96	891.30	895.65	900.00

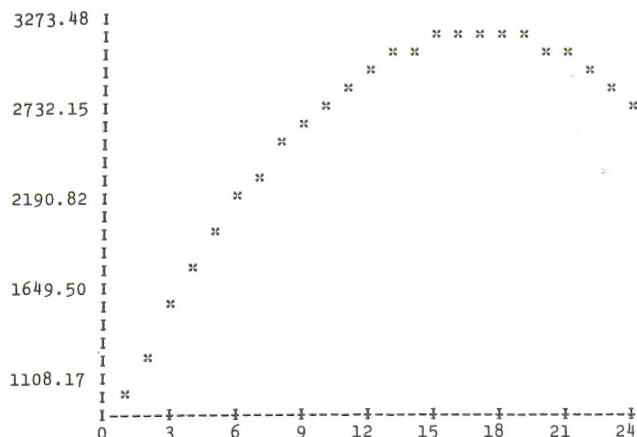
Reference 10 is 'other direct production costs'. The forecast is over 24 periods. This example shows how helpful the conversational nature of STRATPLAN can be, prompting you to supply all the information necessary for the forecast. You type just the figures in light green.

SPECIFY OPERATION ?GENERATE:20=QUADRATIC(1,1000,8,2500,24,2700)

Once you have become used to forecasting with STRATPLAN you can by-pass the conversational features of input.

SPECIFY OPERATION ?PLOT 20

REFERENCE NO. 20



This is a sales forecast. You could plot the results instead of listing them:

The forecasting routines offer you enormous flexibility.

You can specify a forecast period of your own using any number of periods up to 60.

You can choose from a large number of forecasting techniques; you can select the technique yourself or allow STRATPLAN to recommend the best mathematical fit for the historical data you provide. This selection is made according to accepted statistical criteria from a wide range of trends, deriving polynomials and other curves using regression techniques.

If you are not entirely happy with the results at the first attempt, you can change the criteria selectively and re-run the forecast automatically.

You can get the information you want in minutes.

Reports

First, a full report of quarterly estimates over two years with annual totals.

PAGE NO. 1

QUARTERLY ESTIMATES 1972/73
REPORT PRODUCED: 4 APR 1972
START DATE: JAN 1970

ROW	DESCRIPTION	100	110	120	130	I	140	I	150	160	170	180	I	190	I
		QTR 1	QTR 2	QTR 3	QTR 4	I	TOTALS	I	QTR 1	QTR 2	QTR 3	QTR 4	I	TOTALS	I
		1972	1972	1972	1972	I	1972	I	1973	1973	1973	1973	I	1973	I
100	SALES	2644	2771	2880	2971	I	11266	I	3045	3101	3140	3161	I	12448	I
110	PRICE	10.50	10.50	10.50	10.50	I		I	10.50	10.50	10.50	10.50	I		I
120	REVENUE	27763	29092	30236	31197	I	118288	I	31973	32565	32972	33196	I	130705	I
130	PRODUCTION COSTS -														
140	DIRECT COSTS -														
150	MATERIALS	6610	6927	7199	7428	I	28164	I	7613	7753	7851	7904	I	31120	I
160	LABOUR	4759	4987	5183	5348	I	20278	I	5481	5583	5652	5691	I	22407	I
170	OTHER DIRECT	835	839	843	848	I	3365	I	852	857	861	865	I	3435	I
180	INDIRECT COSTS -														
190	OVERHEADS	1950	2000	2050	2100	I	8100	I	2150	2200	2250	2300	I	8900	I
200	TOTAL PROD COSTS	14154	14753	15276	15724	I	59907	I	16096	16393	16614	16760	I	65862	I
210	GROSS PROFIT	13609	14339	14960	15473	I	58381	I	15877	16172	16358	16436	I	64844	I
220	GP/REVENUE %	49.02	49.29	49.48	49.60	I	49.36	I	49.66	49.66	49.61	49.51	I	49.61	I
230	SALES COSTS -														
240	DIRECT COSTS	5553	5818	6047	6239	I	23658	I	6395	6513	6594	6639	I	26141	I
250	INDIRECT COSTS	1225	1250	1275	1300	I	5050	I	1325	1350	1375	1400	I	5450	I
260	TOTAL SALES COSTS	6778	7068	7322	7539	I	28708	I	7720	7863	7969	8039	I	31591	I
270	PROFIT BEFORE TAX	6831	7271	7638	7934	I	29673	I	8157	8309	8389	8397	I	33253	I
275	PBT/REVENUE %	24.60	24.99	25.26	25.43	I	25.09	I	25.51	25.52	25.44	25.30	I	25.44	I
280	TAX	2732	2908	3055	3174	I	11869	I	3263	3324	3356	3359	I	13301	I
290	NET PROFIT	4099	4362	4583	4760	I	17804	I	4894	4986	5033	5038	I	19952	I

It is not always appropriate to print the whole report. Having considered this projection, you can select the information you would like to be printed. Reports to executive management, for example, may be a concise statement of that information on which their attention needs to be focused. On the other hand, departmental managers may wish to consider all the details.

All reports are produced quickly and are accurately typed.

What If ... ?

In order to find a plan that best fits your company's current and future circumstances, you will want to investigate a number of possible alternatives. STRATPLAN provides a convenient means of answering the 'what if ... ?' questions that arise in such experiments.

Whenever you ask a question, you have to specify only variations from the base case.

'What is the effect on profit if we put up our price by 8% and this leads to a 2% fall off in demand?'

PAGE NO. 1

WHAT HAPPENS TO PROFIT WHEN PRICE IS INCREASED BY 8% WITH A RESULTANT DROP IN SALES OF 2% ?
REPORT PRODUCED: 10 APR 1972
START DATE: JAN 1970

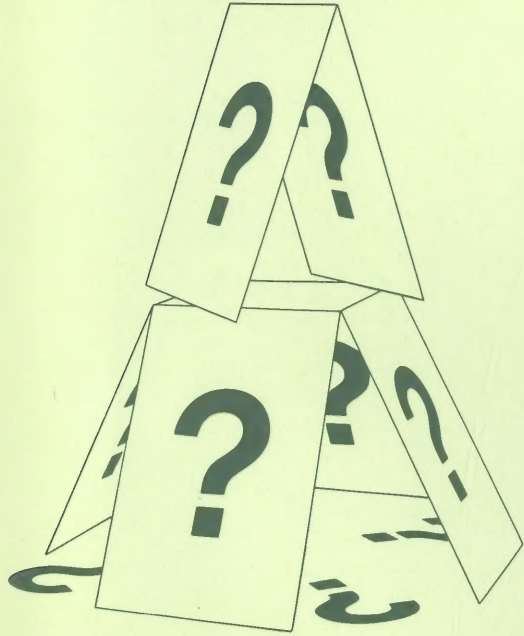
ROW	DESCRIPTION	100	110	120	130	I	140	I	150	160	170	180	I	190	I
		QTR 1 1972	QTR 2 1972	QTR 3 1972	QTR 4 1972	I	TOTALS 1972	I	QTR 1 1973	QTR 2 1973	QTR 3 1973	QTR 4 1973	I	TOTALS 1973	I
100	SALES	2591	2715	2822	2912	I	11040	I	2984	3039	3077	3098	I	12199	I
110	PRICE	11.34	11.34	11.34	11.34	I		I	11.34	11.34	11.34	11.34	I		I
120	REVENUE	29384	30791	32002	33019	I	125196	I	33840	34466	34898	35134	I	138338	I
210	GROSS PROFIT	15457	16276	16974	17550	I	66258	I	18006	18341	18554	18647	I	73547	I
220	GP/REVENUE %	52.60	52.86	53.04	53.15	I	52.92	I	53.21	53.21	53.17	53.07	I	53.16	I
270	PROFIT BEFORE TAX	8356	8868	9298	9647	I	36169	I	9913	10097	10200	10220	I	40430	I
275	PBT/REVENUE %	28.44	28.80	29.06	29.22	I	28.89	I	29.29	29.30	29.23	29.09	I	29.23	I
290	NET PROFIT	5013	- 5321	5579	5788	I	21701	I	5948	6058	6120	6132	I	24258	I

If you are uncertain about the sensitivity of demand to this price increase you could compare a number of cases.

'What happens if sales fall off by 3%, 4% or 5% because of this price increase?'

ROW	DESCRIPTION	110	120	130
		TOTAL 72/73 8%/3%	TOTAL 72/73 8%/4%	TOTAL 72/73 8%/5%
120	REVENUE	260849	258160	255471
200	TOTAL PROD COSTS	127312	126244	125177
210	GROSS PROFIT	133538	131916	130294
220	GP/REVENUE %	51.19	51.10	51.00
260	TOTAL SALES COSTS	62670	62132	61594
270	PROFIT BEFORE TAX	70868	69784	68699
275	PBT/REVENUE %	27.17	27.03	26.89
280	TAX	28347	27913	27480
290	NET PROFIT	42521	41870	41220
300	PROFIT CHANGE	4765	4114	3464
310	PROFIT CHANGE %	11.21	9.83	8.40

This approach enables you to determine quickly the effect of a change on every element of the plan.



Not all these changes are predictable or self-generated like a price increase; typical environmental pressures to which businesses like to react quickly are changes in costs, taxes, competitors' prices, wage rates, legislation and exchange rates. Real-life situations are so complicated that accurate guesswork of the effects is difficult if not impossible.

On occasion you may be faced with a question such as: 'Pre-tax profit should be 30% of revenue by the end of next year. How fast do sales need to grow to achieve this objective if price increases are limited to 5% per year?'

STRATPLAN can answer questions like this for you. It adjusts factors in your model within limits you specify until it can provide a solution.

You do not spend your time performing complex, repetitive calculations; you concentrate your attention on evaluating the alternatives which STRATPLAN analyses.

The ability to reforecast when changes occur is valuable in single product situations such as the one shown in these examples. When STRATPLAN is used throughout your company you have the additional benefit of being able to aggregate common variables to produce consolidated reports.

STRATPLAN allows you to integrate departmental activities into an overall company plan as well as to evaluate returns for individual projects.

Reporting Variances from the plan

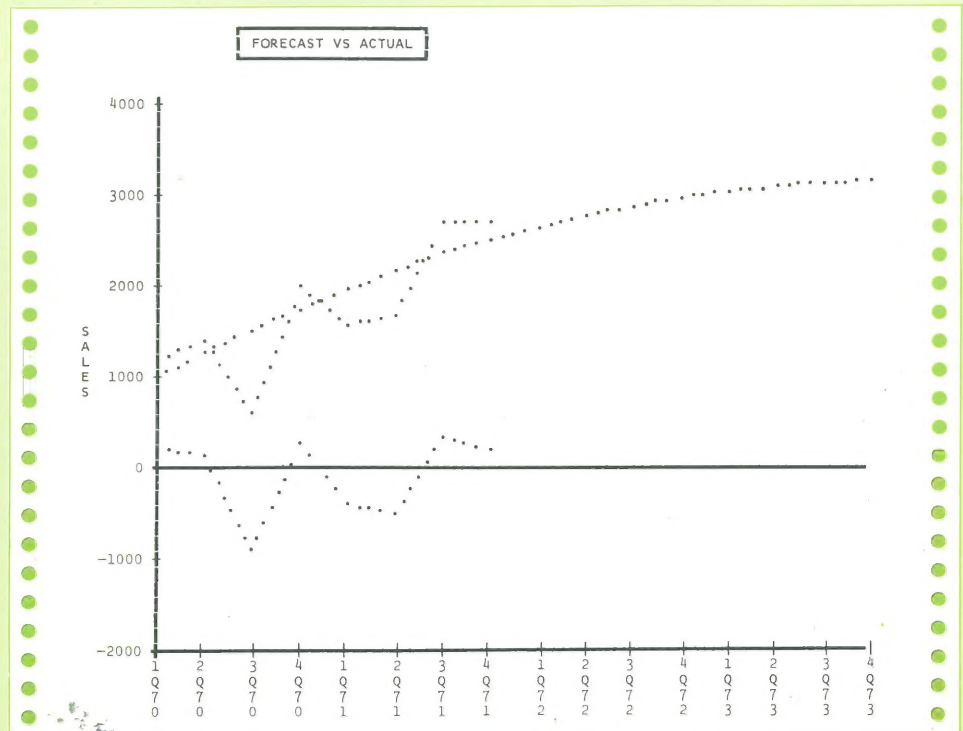
After setting objectives, defining the plan and allocating budgets, it is important to monitor performance against pre-determined standards.

This compares actual with forecast figures for the third quarter 1971 and also examines the cumulative position for 1971 to the end of September.

REPORT PRODUCED: 4 APR 1972
START DATE: JAN 1970

ROW	DESCRIPTION	120	130	140	150	160	170
		BUDGET	ACTUAL	DIFF %	BUDGET	ACTUAL	DIFF %
		QTR 3	QTR 3	QTR 3	Y-T-D	Y-T-D	Y-T-D
		1971	1971	1971	1971	1971	1971
100	SALES	2338	2690	15.04	6460	5810	-10.06
120	REVENUE	24553	28030	14.16	67829	59854	-11.76
130	PRODUCTION COSTS						
150	MATERIALS	5846	5302	-9.30	16150	11107	-31.23
160	LABOUR	4209	4328	2.83	11628	8384	-27.90
170	OTHER DIRECT	826	1086	31.46	2465	3261	32.28
190	OVERHEADS	1850	3722	101.19	5400	7154	32.48
200	TOTAL PROD COSTS	12731	14438	13.41	35643	32453	-8.95
210	GROSS PROFIT	11822	13792	16.67	32186	27601	-14.25
230	SALES COSTS						
240	DIRECT COSTS	4911	3626	-26.16	13566	7121	-47.51
250	INDIRECT COSTS	1175	2334	98.64	3450	4952	43.54
260	TOTAL SALES COSTS	6086	5960	-2.06	17016	12073	-29.05
270	PROFIT BEFORE TAX	5736	7832	36.54	15171	15528	2.36
280	TAX	2294	3132	36.50	6068	6210	2.34
290	NET PROFIT	3442	4700	36.56	9102	9318	2.37

The sales results are up for the quarter, but the year-to-date position shows a short-fall of 10%. If you wished to examine this element in greater detail you could plot a graph to provide a clear indication of whether or not sales are likely to need more attention.



Summary



STRATPLAN can give you answers quickly, cheaply and easily. It can help you to make sound decisions by giving you up-to-date information. And the information is supplied in minutes because the terminal can be right beside your office.

STRATPLAN is an integrated system developed specially for CALL/360. It provides a way of handling all sorts of information; that is why it provides solutions in a wide range of planning situations.

Experienced IBM Data Centre Services analysts are available to advise you in the use of STRATPLAN.

If you would like to see a demonstration, please contact your nearest IBM branch office.

CALL/360 STRATPLAN is a valuable tool for planners.

STRATPLAN is easy to learn because all the statements you use are in English.

Its flexibility enables it to be applied to a wide range of companies.

You can begin with one department or division before extending it to your entire company.

STRATPLAN allows you to concentrate on asking the pertinent planning questions and evaluating the answers.

You get well-printed listings or plotted graphs – within minutes of requesting them.



